

# Variation in stakeholders' views on homework and grading: A study to improve policy & practice

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## Abstract

School policies regarding homework and grading are among the most controversial areas of education reform. This quantitative study investigates differences in various stakeholders' perspectives on these important issues. A survey with common items related to homework and grading policies was administered to all parents/families, teachers, principals, and district leaders in a medium-size Midwest school district in the United States prior to the development and implementation of policy change initiatives. Results from 1,765 responses showed statistically significant differences in stakeholders' views regarding the purpose of homework, parents'/families' role in homework, the purpose of grades, and meaning of grades, especially with principals. Principals' views on homework in grades and what evidence teachers should use to assign grades are unlike other stakeholders. Differences also vary depending on the school level of students involved. A discussion includes the nature of these differences along with implications and a framework for policy development, implementation, and professional learning.

## Keywords

Grading, homework, parents, policy implementation, education reform.

Homework and grading practices have long been central to the relationship between schools and families, serving as key conduits for communication about student learning and academic expectations (Cooper et al., 2006; Gill & Schollossman, 2003; Grolnick & Pomerantz, 2022; Van Voorhis, 2004). These educational practices not only provide families with crucial information

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about learning objectives but also serve as mechanisms for parental involvement in the educational process (Acock & Demo, 1994; Epstein et al., 1997; Link & Guskey, 2022; Murray, 2023). However, the landscape of homework and grading is far from uniform, with significant variations in stakeholder perspectives and practices across different educational levels and contexts (Baumgartner et al., 1993; Jargon, 2019; Kralovec & Buell, 2000; Lacina-Gifford & Gifford, 2004; Lahey, 2017; Payne & Swanson, 2022; Warton, 1998).

Recent investigations highlight the evolving nature of homework and grading in the digital age, with new technologies reshaping traditional practices and introducing novel challenges (Timotheou et al., 2023). This technological shift adds another layer of complexity to the already multifaceted issues surrounding homework and grading, necessitating a reevaluation of long-held assumptions and practices (Link & Guskey, 2019). Despite these changes, the fundamental questions about the purpose and utility of homework and grading remain at the forefront.

A synthesis of the literature reveals several key trends and points of contention. First, there is a general consensus among stakeholders—including parents/families, teachers, and school leaders about the potential benefits of homework for learning and the development of non-cognitive (behavioral) skills such as responsibility and self-regulation (Hoover-Dempsey et al., 2001; Xu & Corno, 2003). However, this agreement is tempered by widespread concerns about the utility of homework assignments, with many stakeholders believing that improvements are necessary to fully realize these benefits (Cooper et al., 2006; O’Sullivan, 2023).

The interconnected nature of homework and grading practices adds another layer of complexity to this issue. Cooper (2007) found that homework typically accounts for a significant portion of students’ grades, often around 20-25%, with this percentage increasing when homework is closely tied to classwork. This interrelationship underscores the need for a comprehensive examination of both practices to fully understand their impact on student learning and stakeholder perceptions.

Grading practices, like homework, are characterized by significant variation and ongoing debate. Studies have consistently shown that teachers consider a mix of cognitive (achievement) and non-cognitive (behavioral) factors when determining grades (McMillan & Nash, 2000; Russell & Austin, 2010; Sun & Cheng, 2013; Svennberg et al., 2014; Yesbeck, 2011), often resulting in what Brookhart (1991) termed a “hodgepodge” grade (p. 36). This amalgamation of achievement, effort, behavior, and improvement can be challenging for parents and students to interpret and utilize effectively (Link, 2018; Link & Guskey, 2022; Swan et al., 2014). The subjectivity inherent in this approach to grading has led to calls for more transparent and standardized grading practices.

While the literature provides a wealth of information on stakeholder views and practices related to homework and grading, it also reveals several critical gaps. First, there is a need for more research on how these views and practices evolve across different educational levels. As students progress through their academic careers, expectations for their learning and behavior change, and it is reasonable to assume that stakeholder perspectives on homework and grading might shift accordingly (Hoover-Dempsey et al., 2001; Payne & Swanson, 2022; Wright, 2010).

Secondly, the existing research often fails to fully explore the multidimensional nature of conflicts surrounding homework and grading. These conflicts are not solely academic in nature but are influenced by cultural, socioeconomic, and educational factors (Link & Kauffman, 2021). For instance, recent studies have highlighted how traditional homework and grading practices can exacerbate educational inequities, particularly for students from lower socioeconomic backgrounds or culturally diverse communities (Rønning, 2011; Feldman, 2019).

Furthermore, the methodological approaches used in previous studies have limitations. For instance, Fan et al. (2017) employed meta-analytic techniques to analyze 30 years of research on homework’s impact on math and science achievement. This study offered a comprehensive overview of research trends but was restricted to these two subject areas, potentially overlooking the nuances of homework’s

effects in other disciplines. One significant limitation of previous grading studies is the tendency to focus on specific grade levels without providing a comprehensive view across the entire K-12 spectrum. For instance, Brookhart et al. (2016) conducted a comprehensive review of grading research but noted that most studies concentrated on secondary education, with limited attention to elementary grading practices. This gap is particularly problematic given that grading practices and their purposes often differ significantly between elementary and secondary levels (Guskey & Link, 2019).

Another limitation is the lack of diverse stakeholder perspectives in many grading studies. While teacher perspectives on grading have been well-documented (e.g., Link, 2018; Randall & Engelhard, 2010), other key stakeholders are often underrepresented. For instance, despite being the primary subjects of grading practices, student voices are often missing from grading research (Link & Hunter, 2024). Studies like those by Kunnath (2017) have begun to address this gap, but more comprehensive research including students across all grade levels is needed. While some studies have examined parental involvement in education broadly (e.g., Barger et al., 2019), specific research on parents' understanding and perceptions of grading practices across different grade levels is limited. School and district administrators play a crucial role in shaping grading policies, yet their perspectives are often underrepresented in grading research (Link, 2019). Few studies have systematically compared the perspectives of multiple stakeholder groups within the same educational context. Such comparisons are crucial for understanding alignment or misalignment in grading expectations and interpretations.

In light of these gaps, our study aims to investigate a comprehensive range of grade levels and diverse stakeholder perspectives regarding the purpose and utility of both homework and grading. Specifically, we seek to determine if parents/families, teachers, principals, and school leaders hold similar views, and if these views vary depending on school level (i.e., elementary, middle school, and high school). By examining these perspectives across different educational levels, we aim to provide insights into how stakeholder views evolve as students progress through their academic careers.

## Theoretical framework

The complex interplay between homework practices, grading systems, and educational outcomes has been a subject of extensive research in the field of education. At the core of this framework is the understanding that homework serves multiple purposes across different educational levels, and these purposes are intrinsically tied to broader educational goals and grading practices. The framework draws upon social cognitive theory (Bandura, 1986) and expectancy-value theory (Eccles & Wigfield, 2002) to explain how homework and grading practices influence student motivation, engagement, and achievement.

Research consistently demonstrates that teachers assign homework for different reasons at the elementary and secondary levels, reflecting the developmental needs of students and the changing educational priorities across grade levels. At the elementary level, homework is predominantly viewed as a tool for developing non-cognitive (behavioral) skills and preparing students for future academic challenges (Fox, 2016; Mulhenbruck et al., 1999). This aligns with Bandura's (1986) concept of self-efficacy, as early positive experiences with homework can foster a sense of competence and motivation in young learners.

Moreover, elementary-level homework serves as a crucial communication bridge between school and home. Numerous studies highlight its role in involving parents in their children's education and fostering family-school partnerships (Epstein & Van Voorhis, 2001; Gill & Schlossman, 2004; Linek et al., 1997; Murray, 2023). This aspect of homework aligns with Bronfenbrenner's (1979) ecological systems theory, emphasizing the importance of connections between different microsystems in a child's life.

As students progress to secondary education, the primary purpose of homework shifts toward deepening subject matter knowledge (Cooper et al., 2006; Korkmaz, 2007; Xu & Corno, 2003). This transition reflects the increasing complexity of academic content and the growing emphasis on subject specialization in higher grades. Recent research by Wu et al. (2023) further supports this trend, noting that the relationship between homework and academic achievement generally strengthens as students move from elementary to high school. However, it is important to note that homework purposes are not mutually exclusive across educational levels. Contemporary studies suggest a more nuanced understanding, identifying instructional, communicative, and political purposes of homework across both elementary and secondary levels (Link & Guskey, 2022; Moroni et al., 2015; Van Voorhis, 2011; Wright, 2010). This multifaceted approach to homework aligns with expectancy-value theory (Eccles & Wigfield, 2002), as different homework purposes can influence students' expectations of success and the value they place on academic tasks.

The effectiveness of homework in achieving educational goals has been a subject of ongoing research. Meta-analytic reviews generally reveal a positive influence of homework on academic achievement (Fan et al., 2017; Marzano & Pickering, 2007; Van Voorhis, 2011). However, the magnitude of this influence varies by school level (Cooper, 2007; Cooper et al., 2006). A recent meta-analysis by Fan et al. (2017) found a small but positive overall relationship between homework and students' academic achievement in math and science, with stronger relationships observed for elementary and high school students compared to middle school students.

Despite the general consensus on homework's potential benefits, views on what constitutes homework vary among stakeholders. Recent studies indicate diverse perspectives among parents/families, teachers, and school leaders regarding the characteristics of effective homework (Fox, 2016; Miller et al., 2013; Payne & Swanson, 2022; Van Voorhis, 2011). This diversity of views underscores the need for clear communication and alignment between home and school regarding homework expectations and purposes.

Closely tied to homework practices are educators' perspectives on grading. Research has long identified varying views among educators about the purpose of grades (Frisbie & Waltman, 1992; Guskey & Bailey, 2001). More recent investigations have extended this understanding to include parents' perspectives on grading (Barger et al., 2019; Dumont et al., 2014; Swan et al., 2014). These studies highlight the importance of considering multiple stakeholder perspectives in developing effective grading policies.

Furthermore, recent research reveals significant differences among teachers at different school levels regarding the purpose of grades and the sources of evidence used in grading decisions (Guskey & Link, 2022). These differences are particularly pronounced at the middle and high school levels, where grading aims, formats, and practices can vary considerably (Link, 2019; GradingRx, 2024; Patrick, 2015). This variability in grading practices underscores the need for a more aligned approach to ensure fairness and consistency in student assessment.

The integration of homework and grading practices provides a comprehensive lens through which to examine their combined impact on student outcomes. By considering both practices simultaneously, we can better understand how they interact to influence student motivation, engagement, and achievement across different educational contexts and demographic groups.

## Methods

### *Instruments*

Three forms of a *Grading and Reporting Survey* were developed and administered to parents/families, teachers, principals and district leaders in the study. Each survey consisted of 20 selected-response items drawn from scales developed in the research of Liu et al. (2006) and Guskey (2013).

Pilot testing of the parent/family, teachers, and principal/district leader surveys with samples of 20+ individuals each yielded internal reliability coefficients ( $\alpha$ ) of .81, .88, and .87 respectively. Responses to six, multi-part items, common to all three surveys, provided additional of data for the study.

The first two common items focused on demographic information. One asked respondents to identify their role as a parent/guardian, teacher, principal, or district leader. The second item asked parents/families to identify the school level of the child on which their responses would be based as elementary, middle school, or high school. Teachers, principals, and district leaders were asked to identify their primary professional assignment as elementary, middle school, high school, or district-level.

The next four items addressed homework and grading issues. Items presented multiple options and asked respondents to “check all that apply.” The first homework item asked:

I believe the purpose of homework is to:

- Reinforce classroom content/ Practice skills learned at school
- Teach students life skills such as time management, organization, effort and responsibility
- Teach students work ethic
- Prepare students for assessments
- Accommodate for different learning styles
- Engage parents/families in their child’s learning

Response options to this item were drawn primarily from the research of Cooper et al. (2006), and Cooper (2007) to capture the multifaceted nature of homework’s perceived functions.

A second item addressed grading and asked:

I believe the purpose of grades is to:

- Measure student achievement
- Compare student performance
- Determine students’ level of effort and responsibility
- Communicate students’ performance to parents/families
- Assign students to appropriate courses/programs (i.e., Advanced Placement, Special Assistance, etc.)
- Predict performance on standardized assessments

Response options for this item were drawn from the research of Brookhart (2011), Guskey (2015), and McMillan (2001) to encompass various purpose functions of grades. A third, multiple-response item addressed parents/families’ role in homework and asked:

I believe a parent’s/ guardian’s role in the homework process is to:

- Create a space that is conducive to doing homework

- Ask about assignments and actively encourage children to complete homework on time
- Convey to children that completion of homework (and learning in general) is important
- Help children so they are completing their homework correctly
- Set rules about homework completion before other activities take place

The item was drawn from the research of Cooper et al. (2006) to explore homework's home-school connection.

The final, dichotomous-response item addressed the information communicated in grades recorded on report cards and asked:

Students' report card grades reflect their mastery of course concepts

- Yes
- No

For items that asked respondents to "check all that apply," each response alternative was coded "1" if checked and "0" if unchecked. Since checking one response alternative did not influence checking any other, response alternatives to the three, multiple-option items were considered 18 independent, dichotomously-scored items for the analysis. All parents/families, teachers, principals, and district leaders were assured anonymity in all recorded responses and only summaries of group data would be reported.

### *Data sources and evidence*

Surveys were distributed at mid-year via email to all K-12 parents/families, teachers, principals, and district leaders in a medium size school district in the Midwestern U.S. where major reforms in homework and grading policies were being considered. The district serves approximately 7,400 students in 10 schools and employs 460 full-time teachers and 25 administrators. The district is classified as suburban, and 85% of students are White/Caucasian. Approximately 15% of students across the district come from economically disadvantaged homes, and only one elementary school is classified as a Title I school; that is, a school with a high percentage of children from low-income families. Approximately 12% of students in the district receive special education services.

A total of 1,520 of the 7,362 parents/families of district students completed and submitted the survey, yielding a response rate of approximately 21%. Among teachers, 229 of the 460 returned fully completed surveys for a response rate of 50%, and 16 of the 25 principals and school building administrators submitted completed forms for a 64% response rate.

Several strategies were employed to address and increase response rates. An initial email invitation was sent to all potential participants, explaining the importance of the study and how their input would contribute to district decision-making. Two reminder emails were sent to non-respondents at 1-week intervals following the initial invitation, and the survey remained open for 3 weeks to accommodate participants' schedules.

### *Analytical techniques*

This study employs a multi-faceted analytical approach to examine differences in perceptions about homework and grading practices across groups and school levels. Radar diagrams are

**Table 1.** Respondents by subgroup role and school level ( $n = 1,765$ ).

School level	Elementary	Middle	High	Total
Role				
Parent/Guardian	712	384	424	1,520
Teacher	95	50	84	229
Principal/Building Administrator	5	5	6	16
Total	812	439	514	1,765

initially utilized to visually display the means of survey item responses for each sample group and school level, providing a quick overview of response patterns (Seide et al., 2020). This technique allows for cursory inspection and compact way to compare multiple variables across different groups simultaneously (Evergreen & Metzner, 2013; Kaczynski et al., 2008). To test the statistical significance of these observed differences, two-way multivariate analysis of variance (MANOVA) was conducted. MANOVA allows for the simultaneous analysis of multiple dependent variables (in this case, each survey item) while controlling for Type I error that could result from conducting multiple separate analyses (Meyers et al., 2016).

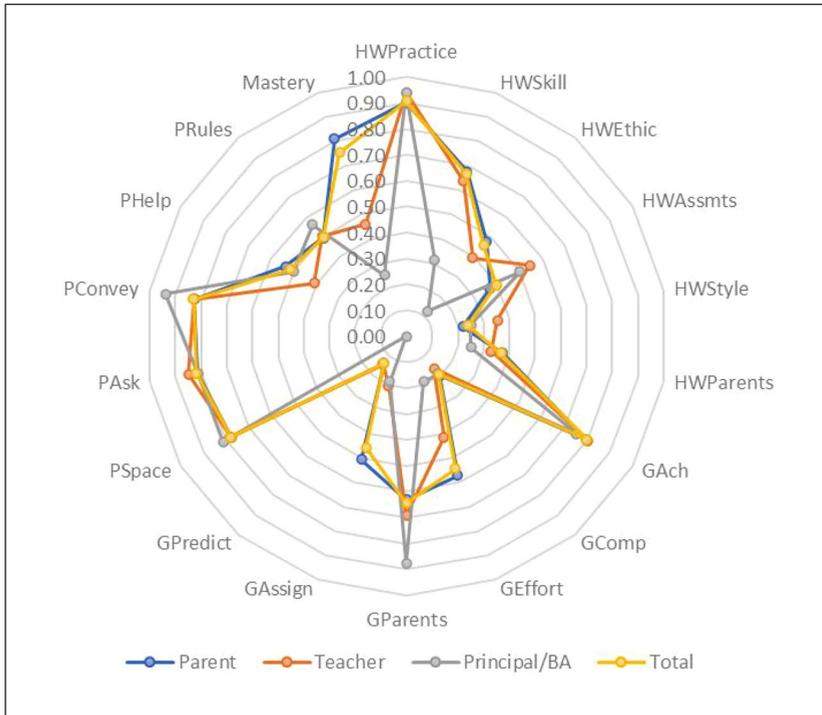
Following the MANOVA, a univariate analyses of variance (ANOVAs) was used to more thoroughly analyze the differences between groups and across levels for individual survey items (Meyers et al., 2016). This step-down analysis is to address the study's multiple interrelated dependent variables and allow for a more detailed understanding of where specific differences lie (Huberty & Morris, 1989). The combination of these analytical techniques provide a comprehensive examination of the survey data, helping to identify both broad patterns and specific areas of divergence in perceptions about homework and grading practices. All procedures were reviewed and approved through an institutional ethical review process.

## Results

The distribution of respondents by subgroup and across school levels is shown in Table 1. The decision was made to eliminate district leaders' responses from all analyses because of their limited number as a subgroup (i.e.,  $n = 5$ ). The response rates for parents/families and teachers across school levels were fairly comparable and roughly proportional to the student populations at each level. In other words, while overall response rates differed among groups, response rates across levels were quite similar.

### Reading radar diagrams

To interpret Radar diagrams, as shown in Figures 1 and 2, each spoke of the diagram represents a survey item, with the center of the diagram representing the lowest possible survey score and the outer edge representing the highest possible score. The position of each point on a spoke indicates the mean score for that item for a particular group. To decipher, focus relies on both the overall shapes and individual spokes. A larger shape indicates higher overall scores, while differences in specific spokes highlight areas of divergence between groups. For example, in Figure 1, one can quickly see how teachers, students, and parents/families differ across all survey items by comparing the shapes and individual points. Unlike bar graphs or scatter plots, radar diagrams do not require multiple charts to illustrate data.



**Figure 1.** Comparison of survey item means by subgroup.

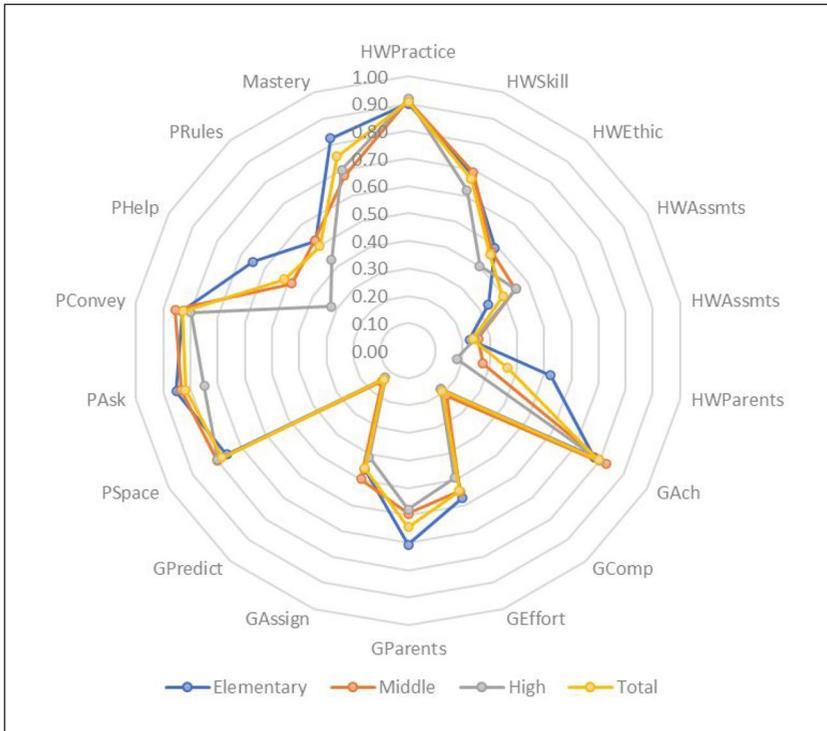
Note. Radar diagram displays means from each participant subgroup. Standard deviations and standard errors are available in Table 3.

Figures 1 and 2 show Radar diagram displays of the means of survey item responses for each sample group (parents/families, teachers, and principals/building administrators) and school level (elementary, middle, and high school), respectively. Since items were scored dichotomously (1 or 0), a mean of greater than .5 indicates a majority of respondents in that subgroup agreed with the statement and offered an affirmative response.

Cursory inspection of item means in Figure 1 reveals that groups responded similarly to several of the items. For example, all groups generally agree that homework *should* reinforce classroom content, grades *should* reflect classroom achievement, grades *should not* compare students' performance, and the purpose of grades is *not* to predict students' performance on standardized assessments. Groups also agree that parents/families' role regarding homework *should* involve creating space conducive to doing homework, asking about assignments, and conveying that completing homework is important. However, groups were evenly split between agree and disagree on parents'/families' role in setting rules about homework completion before other activities take place.

On other items, differences among groups appear evident. For example, parents/families and teachers seem to put *more emphasis* on the role of homework in teaching life skills and work ethic than do school principals. Likewise, parents/families and teachers also appear to place *more importance* on grades reflecting effort and responsibility than do principals but, surprisingly, *less importance* on grades communicating to parents/families.

Furthermore, parents/families appear to believe grades are used to assign students to appropriate programs more than do teachers or school principals. In addition, they also appear far more



**Figure 2.** Comparison of survey item means by level.

Note. Radar diagram displays means from each school level. Standard deviations and standard errors are available in Table 4.

confident than educators that report card grades reflect students’ mastery of course concepts. This may reflect an apparent mismatch between what parents/families believe grades represent and what teachers and school principals know about how grades are determined.

Figure 2 shows differences across levels. Specifically, respondents at all levels believe grades *should* reflect classroom achievement, but *should not* be used to make comparisons between students or to predict standardized assessment performance. Responses further suggest that homework is leveraged as a communication and engagement tool with parents/families at the elementary school level, but less so in middle and high school levels. Tests of the statistical significance of these differences are described below.

Inter-item correlations are illustrated in Table 2. Because of the relatively large sample size, a conservative statistical significance level of  $\alpha < .001$  was selected for these tests. Strictly defined, both group (i.e., parents/families, teachers, principals) and level (i.e., elementary, middle, and high school) are categorical variables with nominal properties only. However, the purposeful ordering of school level categories makes possible interpretations of some of these measures of linear relationship. For example, it appears as school level increases, the use of homework to engage parents/families in students’ learning generally becomes a less important purpose ( $r = -.307$ ). Similarly, as school level increases, the involvement of home support for students to correctly complete their homework also appears to decrease in importance ( $r = -.294$ ).

**Table 2.** Grading and reporting survey inter-item correlations (n = 1,765).

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1. Group	—																			
2. Grade Level	.062*	—																		
3. HWPractice	.042	.027	—																	
4. HWSkill	-.072*	-.014	.037	—																
5. HWEthic	-.082*	-.055*	.156*	.563*	—															
6. HWAssmts	.091*	.105*	.101*	.238*	.318*	—														
7. HWStyle	.085*	.021	.096*	.258*	.318*	.314*	—													
8. HWParents	-.044	-.307*	.079*	.298*	.353*	.149*	.336*	—												
9. GAch	-.005	.033	.224*	.180*	.209*	.167*	.135*	.102*	—											
10. GComp	-.030	.003	.089*	.149*	.209*	.205*	.182*	.148*	.124*	—										
11. GEffort	-.115*	-.027	.093*	.373*	.388*	.190*	.227*	.220*	.126*	.209*	—									
12. GParents	.063*	-.131*	.200*	.229*	.262*	.219*	.198*	.262*	.153*	.228*	.316*	—								
13. GAssign	-.194*	-.025	.143*	.265*	.327*	.224*	.209*	.251*	.187*	.237*	.336*	.319*	—							
14. GPredict	-.024	-.016	.012	.118*	.178*	.308*	.191*	.189*	.066*	.329*	.145*	.165*	.214*	—						
15. PSpace	-.005	.028	.191*	.283*	.288*	.237*	.182*	.198*	.183*	.125*	.191*	.247*	.238*	.108*	—					
16. PAsk	.011	-.087*	.209*	.279*	.254*	.199*	.134*	.222*	.155*	.098*	.179*	.161*	.184*	.075*	.306*	—				
17. PConvey	.003	-.031	.205*	.311*	.316*	.229*	.144*	.235*	.209*	.120*	.178*	.269*	.219*	.109*	.364*	.327*	—			
18. PHelp	-.072*	-.294*	.098*	.117*	.178*	.179*	.106*	.354*	.105*	.139*	.129*	.204*	.127*	.159*	.211*	.269*	.253*	—		
19. PRules	.001	-.071*	.117*	.216*	.278*	.288*	.207*	.251*	.132*	.196*	.153*	.239*	.202*	.149*	.343*	.283*	.298*	.371*	—	
20. Mastery	-.313*	-.129*	.011	.148*	.113*	-.018	.019	.091*	.064*	.025	.156*	.036	.163*	.031	.032	.020	.000	.042	.029	—

\*p < .001.

These results show that responses to most survey items are positively but modestly correlated, with the majority of correlations ranging from  $+ .10$  to  $+ .35$ . Exceptions include the relationship between homework purpose to teach life skills and homework purpose to teach work ethic ( $r = + .56$ ), and homework purpose to teach work ethic and grading purpose to recognize effort and responsibility ( $r = + .39$ ). Across all groups, respondents who believe homework teaches life skills also believe it teaches work ethic. In addition, those who believe homework's purpose is to teach work ethic also believe grades should recognize effort and responsibility.

Table 3 presents survey item means, standard deviations, and standard errors across different subgroups: parents/families, teachers, principals, district staff, and a total aggregate. The data reveals notable variations in perceptions and attitudes among these stakeholder groups across various aspects of homework, grading, and parental involvement in education.

One striking observation is the consistently high mean scores for homework practice (HW Practice) across all groups, ranging from 0.90 to 1.00, suggesting a strong consensus on the importance of homework for skill reinforcement. However, there are marked differences in other areas. For instance, parents/families show a higher mean (0.48) for homework ethics (HW Ethic) compared to teachers (0.39) and principals (0.13), indicating potential discrepancies in views on the moral value of homework. Additionally, the data reveals interesting disparities in perceptions of grading practices. While parents and teachers align closely on grading achievement (G Ach) with means of 0.80, there's a notable difference in views on grading effort (G Effort), with parents scoring higher (0.57) compared to teachers (0.41) and principals (0.19). This suggests that parents may place more emphasis on effort in grading than educators do, which could have implications for discussions around assessment practices.

Table 4 reveals trends in educational perspectives across elementary, middle, and high school levels. As the school level increases, there's a noticeable decrease in agreement on several key aspects. Specifically, support for homework as a means to build work ethic (HW Ethic) declines sharply from elementary (0.34) to high school (0.23). Similarly, the belief in homework's role in skill development (HW Skill) drops from 0.61 in elementary to 0.38 in high school. Parental involvement in homework (HW Parents) also shows a marked decrease, from 0.51 in elementary to just 0.10 in high school.

Middle schools show the highest agreement on several items. They lead in supporting homework assessments (HW Assmts, 0.64) and homework style variety (HW Style, 0.49). Middle schools also show the strongest agreement on grading based on achievement (G Ach, 0.90) and grading effort (G Effort, 0.54). They also have the highest scores for parent-teacher communication items (P Ask, 0.89 and P Convey, 0.90). High schools, conversely, show the lowest agreement on many items. They have the lowest scores for homework ethics (HW Ethic, 0.23), parental involvement in homework (HW Parents, 0.10), and grading based on completion (G Comp, 0.11).

High schools also show the least agreement on parental help with homework (P Help, 0.41) and establishing clear rules for homework completion (P Rules, 0.47). High schools do show the highest agreement on homework as a practice opportunity (HW Practice, 0.95), suggesting a shift in the perceived purpose of homework as students progress through the school system.

Table 5 illustrates a comprehensive breakdown of survey item means, standard deviations, and standard errors across different subgroups and school levels, offering insights into the varying perspectives on homework, grading, and parental involvement across the educational spectrum. A notable trend emerges in the perception of homework practice (HW Practice) across all subgroups and levels, with consistently high means ranging from 0.80 to 1.00. This suggests a widespread agreement on the importance of homework for skill reinforcement. However, there are marked differences in other areas. For instance, the perception of homework ethics (HW Ethic) decreases as the school level increases, with elementary school parents and teachers showing higher means



**Table 4.** Survey item means, standard deviations, and standard errors by school level.

Level	HW Practice	HW Skill	HW Ethic	HW Assmts	HW Style	HW Parents	HW HW	HW Parents	G Ach	G Comp	G Effort	G Parents	G Assign	G Predict	G Space	G Ask	G Convey	G Help	G Rules	Mastery
Elementary (n = 812)	.94	.61	.34	.31	.16	.51	.72	.12	.36	.80	.24	.09	.78	.79	.84	.48	.61	.43		
SEM	.045	.072	.076	.074	.065	.070	.062	.061	.076	.073	.075	.053	.064	.059	.058	.074	.077	.62		
Middle (n = 438)	.89	.66	.43	.64	.49	.30	.90	.33	.54	.64	.44	.10	.81	.89	.90	.50	.49	.58		
SEM	.046	.074	.078	.077	.067	.072	.064	.062	.078	.075	.077	.054	.066	.061	.060	.076	.079	.064		
High (n = 519)	.95	.38	.23	.50	.21	.10	.74	.11	.30	.68	.23	.09	.80	.78	.85	.41	.47	.48		
SEM	.041	.067	.070	.069	.060	.065	.057	.056	.070	.068	.069	.049	.059	.055	.054	.068	.071	.058		
Total (n = 1,769)	.93	.54	.30	.50	.32	.29	.81	.17	.36	.73	.29	.08	.82	.82	.86	.48	.53	.53		
SEM	.026	.042	.045	.044	.038	.041	.037	.039	.045	.043	.040	.031	.038	.035	.034	.044	.045	.037		



**Table 6.** MANOVA results.

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.661	143.414	18.00	1324.00	.000	.661
	Wilks' Lambda	.339	143.414	18.00	1324.00	.000	.661
	Hotelling's Trace	1.950	143.414	18.00	1324.00	.000	.661
	Roy's Largest Root	1.950	143.414	18000	1324.00	.000	.661
Group	Pillai's Trace	.204	8.365	36.00	2650.00	.000	.102
	Wilks' Lambda	.799	8.729	36.00	2648.00	.000	.102
	Hotelling's Trace	.247	9.094	36.00	2646.00	.000	.110
	Roy's Largest Root	.230	16.948	18.00	1325.00	.000	.187
Level	Pillai's Trace	.065	2.480	36.00	2650.00	.000	.033
	Wilks' Lambda	.936	2.486	36.00	2648.00	.000	.033
	Hotelling's Trace	.068	2.492	36.00	2646.00	.000	.033
	Roy's Largest Root	.049	3.604	18.00	1325.00	.000	.047
Group level	Pillai's Trace	.105	1.988	72.00	5308.00	.000	.026
	Wilks' Lambda	.899	1.993	72.00	5208.00	.000	.026
	Hotelling's Trace	.109	1.998	72.00	5290.00	.000	.026
	Roy's Largest Root	.051	3.769	18.00	1327.00	.000	.049

(0.49 and 0.54 respectively) compared to their high school counterparts (0.45 and 0.24). Interestingly, the involvement of parents in homework (HW Parents) also shows a declining trend from elementary to high school levels across all subgroups. This could indicate a shift in expectations and practices regarding parental involvement as students progress through their academic careers. Additionally, there are notable differences in the perception of grading practices across school levels and stakeholder groups. For example, the importance placed on grading effort (G Effort) generally decreases from elementary to high school levels, suggesting a potential shift in grading priorities as students advance in their education.

To test the statistical significance of differences in responses among groups and across school levels, a 2-way, multivariate analysis of variance (MANOVA) was conducted in which group and level were considered two crossed, independent variables, and responses to the 18 items were considered a set of interrelated dependent variables (Table 6). Although the sample size in the groups varied, MANOVA procedures are generally considered sufficiently robust to account for such differences (Kariya, 1981; Meyers et al., 2016). Nevertheless, results from the relatively small group of principals and school building administrators were interpreted with marked caution. In addition, because of the large sample size, the more conservative level of  $\alpha < .001$  was again used for all tests of statistical significance.

The results of this analysis show statistically significant main effects for the multivariate tests for both group,  $F(36, 2,644) = 8.51, p < .001$ , and level,  $F(36, 2,644) = 2.50, p < .001$ , as well as a statistically significant group-by-level interaction,  $F(72, 5,296) = 1.98, p < .001$ . This means that not only do responses differ by group (parents/families, teachers, and principals or building administrators) and by level (elementary, middle, and high school), but the nature of the differences among groups varies depending on the level. Multivariate testing for main and interaction effects at the item level are also included.

Follow-up ANOVA tests of these main effects by subgroup (Table 7) and by school level (Table 8) were then conducted to more thoroughly analyze the differences (Meyers et al., 2016). These

**Table 7.** ANOVA results by subgroup.

Variable		Sum of squares	df	Mean square	F	Sig.
Group	Between groups					
	Within groups					
	Total					
HWPractice	Between groups	.271	3	.090	1.074	.359
	Within groups	112.918	1,341	.084		
	Total	113.189	1,344			
HWSkill	Between groups	2.361	3	.787	3.597	.013
	Within groups	293.450	1,341	.219		
	Total	293.811	1,344			
HWEthic	Between groups	3.601	3	1.200	4.920	.002
	Within groups	327.173	1,341	.244		
	Total	330.774	1,344			
HWAssmts	Between groups	5.852	3	1.951	8.384	.000
	Within groups	311.985	1,341	.233		
	Total	317.837	1,344			
HWStyle	Between groups	4.300	3	1.433	8.058	.000
	Within groups	238.541	1,341	.178		
	Total	242.841	1,344			
HWParents	Between groups	.227	3	.076	.363	.779
	Within groups	279.097	1,341	.208		
	Total	279.324	1,344			
GAchieve	Between groups	.261	3	.087	.537	.657
	Within groups	217.653	1,341	.162		
	Total	217.914	1,344			
GCompare	Between groups	.399	3	.133	.865	.459
	Within groups	206.316	1,341	.154		
	Total	206.715	1,344			
GEffort	Between groups	6.634	3	2.211	9.117	.000
	Within groups	325.248	1,341	.243		
	Total	325.882	1,344			
GParents	Between groups	1.596	3	.532	2.362	.070
	Within groups	301.962	1,341	.225		
	Total	303.558	1,344			
GAssign	Between groups	16.004	3	5.335	22.616	.000
	Within groups	316.326	1,341	.236		
	Total	332.330	1,344			
GPredict	Between groups	.393	3	.131	1.113	.343
	Within groups	157.672	1,341	.118		
	Total	158.065	1,344			
PSpace	Between groups	.235	3	.078	.456	.713
	Within groups	229.987	1,341	.172		
	Total	230.222	1,344			
Pask	Between groups	.237	3	.079	.541	.654
	Within groups	196.194	1,341	.146		
	Total	196.431	1,344			

(Continued)

**Table 7.** (Continued)

Variable		Sum of squares	df	Mean square	F	Sig.
PConvey	Between groups	.176	3	.059	.412	.744
	Within groups	190.618	1,341	.142		
	Total	190.794	1,344			
PHelp	Between groups	1.495	3	.498	2.166	.090
	Within groups	308.513	1,341	.230		
	Total	310.008	1,344			
PRules	Between groups	.231	3	.077	.309	.819
	Within groups	334.631	1,341	.250		
	Total	334.862	1,344			
Mastery	Between groups	20.513	3	6.838	41.834	.000
	Within groups	219.185	1,341	.163		
	Total	239.698	1,344			

**Table 8.** ANOVA results by school level.

Variable		Sum of squares	df	Mean square	F	Sig.
Level	Between groups	28.274	3	9.425	13.089	.000
	Within groups	1270.838	1765	.720		
	Total	1299.112	1768			
HWPractice	Between groups	.322	3	.107	1.207	.306
	Within groups	151.075	1696	.089		
	Total	151.398	1699			
HWSkill	Between groups	3.010	3	1.003	4.489	.004
	Within groups	379.107	1696	.224		
	Total	382.118	1699			
HWEthic	Between groups	4.140	3	1.380	5.611	.001
	Within groups	417.189	1696	.246		
	Total	421.329	1699			
HWAssmts	Between groups	3.754	3	1.251	5.226	.001
	Within groups	405.834	1695	.239		
	Total	409.588	1698			
HWStyle	Between groups	3.447	3	1.149	6.545	.000
	Within groups	297.570	1695	.176		
	Total	301.017	1698			
HWParents	Between groups	.852	3	.284	1.235	.296
	Within groups	389.854	1695	.230		
	Total	390.706	1698			
GAchieve	Between groups	.240	3	.080	.501	.682
	Within groups	268.276	1684	.159		
	Total	268.516	1687			
GCompare	Between groups	.553	3	.184	1.166	.321
	Within groups	266.148	1684	.158		
	Total	266.701	1,687			

(Continued)

**Table 8.** (Continued)

Variable		Sum of squares	df	Mean square	F	Sig.
GEffort	Between groups	6.949	3	2.316	9.449	.000
	Within groups	412.774	1,684	.245		
	Total	419.723	1,687			
GParents	Between groups	1.824	3	.608	2.629	.049
	Within groups	389.380	1,684	.231		
	Total	391.204	1,687			
GAssign	Between groups	16.881	3	5.627	23.536	.000
	Within Groups	402.616	1,684	.239		
	Total	419.497	1,687			
GPredict	Between groups	.448	3	.149	1.208	.305
	Within groups	208.282	1,684	.124		
	Total	208.730	1,687			
PSpace	Between groups	.302	3	.101	.575	.632
	Within groups	296.703	1,691	.175		
	Total	297.005	1,694			
Pask	Between groups	.034	3	.011	.072	.975
	Within groups	266.328	1,691	.157		
	Total	266.362	1694			
PConvey	Between groups	.282	3	.094	.629	.597
	Within groups	253.022	1,691	.150		
	Total	253.304	1,694			
PHelp	Between groups	2.993	3	.998	4.010	.007
	Within groups	420.739	1,691	.249		
	Total	423.732	1,694			
PRules	Between groups	.154	3	.051	.205	.893
	Within groups	423.454	1,691	.250		
	Total	423.608	1694			
Mastery	Between groups	26.137	3	8.712	51.643	.000
	Within groups	228.926	1,357	.169		
	Total	255.062	1,360			

results show that group (parents/families, teachers, or principals and building administrators) had a significant effect regarding the purpose of homework as an assessment,  $F(2, 1,344) = 11.506$ ,  $p < .001$ , as well as homework accommodating for different learning styles,  $F(2, 1,344) = 8.624$ ,  $p < .001$ . Specifically, teachers and parents/families believed homework should prepare students for assessments more than did principals.

In addition, teachers and principals believed that homework should accommodate different learning styles more than did parents/families. A similar group effect was identified regarding the use of grades to reflect students' level of effort,  $F(2, 1,344) = 12.823$ ,  $p < .001$ , where parents/families believed this more strongly than teachers or principals. Parents/families also supported more strongly than either teachers or principals the use of grades to assign students to specialized instruction,  $F(2, 1,344) = 35.394$ ,  $p < .001$ .

Although no statistically significant group differences were identified for the role of the parents/families in the homework process, parents/families more strongly believed that report card grades reflect students' mastery of course concepts,  $F(2, 1,344) = 74.180$ ,  $p < .001$ , than did teachers or

principals. This indicates miscommunication between school and home about what report card grades truly represent.

Results of elementary, middle, or high school level comparisons showed significant differences between elementary level responses and those of the middle and high school levels regarding the purpose of homework as assessment preparation,  $F(2, 1,344)=9.347, p<.001$ , and as a parent engagement tool,  $F(2, 1,344)=76.449, p<.001$ . Statistically significant effects based on level were also found for parents/families' role in encouraging students to ask about assignments and timely completion of homework assignments,  $F(2, 1,344)=8.980, p<.001$ , and in providing support to complete homework correctly,  $F(2, 1,344)=55.040, p<.001$ . Regarding grades, level had a significant effect on perceptions of report card grades as a parent/family communication tool,  $F(2, 1,344)=10.862, p<.001$ , and as a reflection of students' mastery of course concepts,  $F(2, 1,344)=16.454, p<.001$ .

Further inspection of the estimated marginal means of items regarding homework, suggest that teachers at all levels and principals or school building administrators at the middle school level were more likely to consider homework as preparation for assessments. Additionally, principals or school building administrators at the middle school level also saw homework more as an opportunity to accommodate specific learning styles, in comparison to their counterparts at the elementary and high school levels and parents/families across all levels. Elementary parents/families and teachers similarly perceived homework as an engagement tool between home and school, whereas those at the middle and high school level were less convinced. Principals and school building administrators across all levels disagreed with the view that homework should serve as an engagement tool for parents/families.

The estimated marginal means of items regarding grades were also inspected, which suggest that parents/families across all levels were more likely to perceive grades to reflect students' level of effort, with middle school principals or school building administrators most likely to hold this same view. Teachers across all levels were less supportive of this perspective, as well as principals in elementary and high school who expressed minimal agreement. A similar pattern was suggested by the inspection of ratings regarding the use of grades to assign students to specialized instruction, with middle school principals expressing support of this perception. Somewhat similar to perceptions of homework as a tool to engage parents/families, elementary parents/families and teachers were most supportive of the use of grades as a communication tool with parents/families, more than their middle school counterparts and even less so to their high school counterparts. However, principals at all levels held the perception that grades are useful as a communication tool.

Overall, all respondents at each level supported parents'/families' encouragement regarding assignment inquiries and timely completion based on inspection of estimated marginal means of items regarding parents/families. However, high school parents/families, teachers, and principals or school building administrators expressed less support of this perspective than their counterparts at elementary and middle schools. Furthermore, elementary parents/families and teachers expressed the strongest support for parents/families helping with homework, along with middle school and high school principals. High school parents/families and teachers, as well as middle school parents/families, were less supportive of the perception that parents/families should be helping with homework.

Inspection of the estimated marginal means suggest that parents/families across all levels perceive report card grades to reflect students' mastery of course concepts. However, only middle school teachers share this perspective—which is in contrast with principals or school building administrators at that level, and out of alignment with teachers and principals in elementary and high schools.

## Discussion

This study reveals significant differences in perceptions of homework and grading practices among key stakeholder groups (parents/families, teachers, and principals) and across educational levels (elementary, middle, and high school). These findings have important implications for educational policy, practice, and future research.

### *Stakeholder differences*

One of the most striking findings was the misalignment between parents'/families' perceptions of grades and those of educators. Parents/families were far more likely to believe that report card grades reflect students' mastery of course concepts, while teachers and principals were much less confident in this interpretation (Table 3). This disconnect supports previous research highlighting communication gaps between schools and families regarding assessment practices (Brookhart et al., 2016). The current study extends this work by demonstrating that this misalignment persists across all school levels, suggesting a systemic issue rather than one confined to particular grade levels.

Additionally, parents/families placed greater emphasis on grades reflecting effort and responsibility compared to educators, especially principals (Figure 1). This aligns with research by McMillan et al. (2002) showing that parents often value effort-based grading more highly than do teachers. However, our findings suggest this discrepancy may be even more pronounced between parents and school leadership. This raises important questions about how grading policies are developed and communicated, and whether current practices adequately balance the values and expectations of different stakeholder groups.

The study also revealed that parents/families and teachers put more emphasis on homework's role in teaching life skills and work ethic compared to principals (Figure 1). This finding contradicts some previous research suggesting that teachers are less likely than administrators to see homework as valuable for developing such skills (Cooper et al., 2006). Our results indicate a need for further investigation into how different stakeholders conceptualize the purpose of homework and how these views influence policy and practice.

### *Educational level differences*

Clear trends emerged across educational levels, with several homework and grading practices showing declining emphasis from elementary to high school (Table 4). For instance, support for homework as a means to build work ethic and develop skills decreased sharply from elementary to high school. This trend aligns with research by Epstein and Van Voorhis (2001) showing that homework purposes shift as students progress through school, but our findings suggest this shift may be more dramatic than previously recognized.

The decline in perceived parental involvement in homework from elementary to high school (Table 4) is consistent with prior research (Hill & Tyson, 2009). However, our study adds nuance by showing that this decline is observed across all stakeholder groups, suggesting a shared understanding of changing expectations for parental involvement as students age.

Interestingly, middle schools showed the highest agreement on several items, including support for diverse homework styles and grading based on both achievement and effort (Table 4). This unique pattern in middle schools contradicts some previous research suggesting that middle school practices often align more closely with high schools (Xu, 2005). This study's findings indicate that middle schools may occupy a distinct position in terms of homework and grading philosophies, warranting further investigation.

## Implications & Future Directions

The significant discrepancies in perceptions among stakeholder groups and across educational levels have important implications for educational policy and practice. First, the misalignment between parents'/families' understanding of grades and educators' views suggests a critical need for improved communication about grading practices. Schools may need to develop more transparent grading policies and invest in parent education initiatives to bridge this gap.

The declining emphasis on homework for skill development and work ethic in higher grade levels raises questions about the continuity of educational goals across a student's academic career. Policymakers and curriculum designers may need to reevaluate how these important non-academic (behavioral) skills are developed and assessed throughout K-12 education.

The unique position of middle schools in this study suggests that a one-size-fits-all approach to homework and grading policies across K-12 education may be inappropriate. Instead, policies may need to be more finely tuned to the specific needs and expectations of each educational level. Additionally, the finding that principals often hold views that differ from both teachers and parents on key issues like the role of effort in grading (Table 7) is particularly concerning given principals' influence on school policies (Wharton-Beck et al., 2022). This suggests a need for more collaborative policy-making processes that incorporate diverse stakeholder perspectives.

This study also opens several avenues for future research. Longitudinal studies tracking how individual stakeholders' perceptions change as students progress through different school levels could provide valuable insights into the dynamics underlying the cross-sectional differences observed here. More in-depth qualitative research is needed to understand the reasons behind the differing perspectives among stakeholder groups, particularly the unique views often held by principals. This could involve interviews or focus groups to explore the underlying beliefs and experiences shaping these perceptions. Finally, intervention studies testing different approaches to aligning stakeholder perceptions (e.g., enhanced communication strategies, collaborative policy-making processes) could provide practical guidance for addressing the misalignments identified in this study.

## Limitations

Results are based on data from one school district, and it is uncertain if these results are generalizable to other districts with different demographics or economic qualities. Although a 21% response rate from parents/families and 50% response rate from teachers are fairly strong and generally considered acceptable in survey-based research, we are unable to determine if the perceptions of the parents/families and teachers who responded are systematically different from those who did not respond. A higher response rate would improve the validity of results and allow greater certainty in the inferences drawn. Also noted is the variation in response rates among groups. Despite the robustness of the statistical tests employed, these differences compel caution in interpreting results.

Additionally, the survey instrument asked only "what" questions regarding respondents' views on homework and grading practices. It did not probe further and ask "why" stakeholders held those views. Hence, explanations of the reasons behind the identified differences in parents'/families', teachers', and principals' responses are only speculative. It would be helpful to know more precisely, for example, why elementary level teachers leverage homework and grades to cultivate home-school communication and engagement more so than do middle school and high school level teachers. Further research inquiring about the specific reasons for these differences among parents'/families, teachers, and principals at different school levels will help clarify these important issues.

## Conclusion

This study reveals complex patterns of agreement and disagreement among key educational stakeholders regarding homework and grading practices. Findings challenge some existing assumptions about how these practices are perceived and implemented across different educational levels, underscoring the need for a more nuanced, stakeholder-inclusive approach to homework and grading policies in K-12 education.

To address the misalignments identified, a “Stakeholder Alignment Framework” for policy development can be beneficial. This framework would involve regular, structured dialogues between parents/families, teachers, and administrators at each school level to co-create policies that reflect shared understandings and goals. Specific actionable steps could include (a) implementing transparent grading systems that clearly communicate the meaning of grades to all stakeholders; (b) developing level-specific homework policies that evolve with students’ changing needs and capabilities; (c) creating professional development programs for principals focused on bridging perspective gaps with teachers and parents; and (d) establishing regular policy review sessions where all stakeholder groups can provide input on existing practices.

Concerted efforts by policymakers and educational leaders to move beyond one-size-fits-all approaches and embrace a more collaborative, level-specific model of policy development is possible (Fiore, 2016). By aligning homework and grading policies more closely with the nuanced needs and perspectives of different stakeholder groups across educational levels, educators can create more effective, widely supported educational practices that empower all students to reach their full potential.

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## References

- Acock, A. C., & Demo, D. H. (1994). *Family diversity and well-being*. Sage. <https://catalogue.nla.gov.au/catalog/2090943>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall. <https://psycnet.apa.org/record/1985-98423-000>
- Barger, M. M., Kim, E. M., Kuncel, N. R., & Pomerantz, E. M. (2019). The relation between parents’ involvement in children’s schooling and children’s adjustment: A meta-analysis. *Psychology Bulletin, 145*, 855–890. <https://doi.org/10.1037/bul0000201>
- Baumgartner, D., Bryan, T., Donahue, M., & Nelson, C. (1993). Thanks for asking: Parent comments about homework, tests, and grades. *Exceptionality: A Research Journal, 4*, 177–185. [https://doi.org/10.1207/s15327035ex0403\\_3](https://doi.org/10.1207/s15327035ex0403_3)
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press. <https://www.hup.harvard.edu/books/9780674224575>
- Brookhart, S. M. (2011). Educational assessment knowledge and skills for teachers. *Educational Measurement: Issues and Practice, 30*(1), 3–12. <https://doi.org/10.1111/j.1745-3992.2010.00195.x>
- Brookhart, S. M. (1991). Grading practices and validity. *Educational Measurement: Issues and Practice, 10*(1), 35–36. <https://doi.org/10.1111/j.1745-3992.1991.tb00182.x>
- Brookhart, S. M., Guskey, T. R., Bowers, A. J., McMillan, J. H., Smith, J. K., Smith, L. F., Stevens, M. T., & Welsh, M. J. (2016). A century of grading research: Meaning and value in the most common educational measure. *Review of Educational Research, 86*(4), 803–848. <https://doi.org/10.3102/0034654316672069>
- Cooper, H. M. (2007). *The battle over homework: Common ground for administrators, teachers, and parents* (3rd ed.). Corwin Press. <https://doi.org/10.4135/9781483329420>

- Cooper, H. M., Robinson, J. C., & Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research 1987–2003. *Review of Educational Research*, 76(1), 1–62. <https://doi.org/10.3102/00346543076001001>
- Dumont, H., Trautwein, U., Nagy, G., & Nagengast, B. (2014). Quality of parental homework involvement: Predictors and reciprocal relations with academic functioning in the Reading domain. *Journal of Educational Psychology*, 106, 144–161. <https://doi.org/10.1037/a0034100>
- Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53(1), 109–132. <https://doi.org/10.1146/annurev.psych.53.100901.135153>
- Epstein, J. L., Simon, B. S., & Salinas, K. C. (1997). *Effects of teachers involve parents in schoolwork (TIPS) language arts interactive homework in the middle grades*. Research Bulletin 18. Phi Delta Kappa, CEDR. <https://eric.ed.gov/?id=ED355032>
- Epstein, J. L., & Van Voorhis, F. L. (2001). More than minutes: Teachers' roles in designing homework. *Educational Psychologist*, 36, 181–193. [https://doi.org/10.1207/S15326985EP3603\\_4](https://doi.org/10.1207/S15326985EP3603_4)
- Evergreen, S., & Metzner, C. (2013). Design principles for data visualization in evaluation. *New Directions for Evaluation*, 2013(140), 5–20. <https://doi.org/10.1002/ev.20071>
- 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. <https://doi.org/10.1016/j.edurev.2016.11.003>
- Feldman, J. (2019). *Grading for equity: What it is, why it matters, and how it can transform schools and classrooms*. Corwin. <https://us.corwin.com/books/grading-for-equity-2nd-edition-281503>
- Fiore, D. (2016). *School-community relations*. (4th ed.) Routledge. <https://www.perlego.com/book/2192760/schoolcommunity-relations-pdf>
- Fox, K. R. (2016). Homework as a family literacy practice: What counts as best practices for children deemed as high risk for academic failure due to socioeconomic status. *School Community Journal*, 26(2), 215–236. <https://files.eric.ed.gov/fulltext/EJ1124009.pdf>
- Frisbie, D. A., & Waltman, K. K. (1992). Developing a personal grading plan. *Educational Measurement: Issues and Practice*, 11(3), 35–42. <https://doi.org/10.1111/j.1745-3992.1992.tb00251.x>
- Gill, B. P., & Schlossman, S. L. (2004). Villain or savior? The American discourse on homework. *Theory Into Practice*, 43(3), 174–181. <https://www.proquest.com/docview/218832077?sourcetype=Scholarly%20Journals>
- Gill, B. P., & Schlossman, S. (2003). Parents and politics of homework: Some historical perspectives. *Teachers College Record*, 105, 846–871. <https://doi.org/10.1111/1467-9620.00270>
- GradingRx (2024). *Stakeholder survey: Assessing and grading student learning*. <https://gradingrx.com/>
- Grolnick, W. S., & Pomerantz, E. M. (2022). Should parents be involved in their children's schooling? *Theory into Practice* 61(3), 325–335. <https://eric.ed.gov/?id=EJ1366080>
- Guskey, T. R. (2015). *On your mark: Challenging the conventions of grading and reporting*. Solution Tree Press. <https://www.solutiontree.com/on-your-mark.html>
- Guskey, T. R. (2013). Beyond tradition: Teachers' views of crucial grading and reporting issues. *Journal of Educational Research and Policy Studies*, 13(1), 32–49. <https://eric.ed.gov/?id=ED509342>
- Guskey, T. R., & Bailey, J. (2001). *Developing grading and reporting systems for student learning*. Corwin. <https://us.corwin.com/books/developing-grading-reporting-9645>
- Guskey, T. R., & Link, L. J. (2022). Feedback for teachers: What evidence do teachers find most useful? *Journal of Scholarship and Practice*, 18(4), 9–20. <https://eric.ed.gov/?id=EJ1330373>
- Guskey, T. R., & Link, L. J. (2019). Exploring the factors teachers consider in determining students' grades. *Assessment in Education: Principles, Policies & Practice*, 26(1), 23–30. <https://doi.org/10.1080/0969594X.2018.1555515>
- Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. *Developmental Psychology*, 45(3), 740–763. <https://doi.org/10.1037/a0015362>
- Hoover-Dempsey, K.V., Battiato, A. C., Walker, J. M. T., Reed, R. P., DeJong, J. M., & Jones, K. P. (2001). Parental involvement in homework. *Educational Psychologist*, 36, 195–209.

- Huberty, C. J., & Morris, J. D. (1989). Multivariate analysis versus multiple univariate analyses. *Psychological Bulletin*, 105(2), 302–308. <https://doi.org/10.1037/0033-2909.105.2.302>
- Jargon, J. (2019, October 15). The new parental obsession: Checking kids' grades online. *The Wall Street Journal*. <https://www.wsj.com/articles/the-new-parental-obsession-checking-kids-grades-online-11571131801>.
- Kaczynski, D., Wood, L., & Harding, A. (2008). Using radar charts with qualitative evaluation: Techniques to assess change in blended learning. *Active Learning in Higher Education*, 9(1), 23–41. <https://doi.org/10.1177/1469787407086743>
- Korkmaz, I. (2007). Teachers' opinions about the responsibilities of parents, schools, and teachers in enhancing student learning. *Education*, 127(3), 389–399. <https://eric.ed.gov/?id=EJ790106>
- Kralovec, E., & Buell, J. (2000). *The end of homework: How homework disrupts families, overburdens children, and limits learning*. Beacon Press. <https://eric.ed.gov/?id=ED450930>
- Kunnath, J. P. (2017). Teacher grading decisions: Influences, rationale, and practices. *American Secondary Education*, 45(3), 68–88. <http://www.jstor.org/stable/45147907>
- Lacina-Gifford, L., & Gifford, R. (2004). Putting an end to the battle over homework. *Education*, 125, 279–280. <https://eric.ed.gov/?id=EJ698725>
- Lahey, J. (2017, August 22). The downside of checking kids' grades constantly. *The New York Times*. Retrieved from: <https://www.nytimes.com/2017/08/22/well/family/the-downside-of-checking-kids-grades-constantly.html>
- Linek, W. M., Rashinski, T. V., & Harkins, D. M. (1997). Teacher perceptions of parent involvement in literacy education. *Reading Horizons*, 38, 90–107. <https://eric.ed.gov/?id=EJ560775>
- Link, L. J. (2019). Leadership in grading reform. In T. R. Guskey, & S. M. Brookhart (Eds.) *What We Know About Grading* (pp. 157–194). Association for Supervision and Curriculum Development. <https://eric.ed.gov/?id=ED592082>
- Link, L. J. (2018). Teachers' grading perceptions: How pre-service training makes a difference. *Journal of Research in Education*, 27(2), 62–91. <https://eric.ed.gov/?id=EJ1168160>
- Link, L. J., & Guskey, T. R. (2022). Is standards-based grading effective? Special Issue. Controversies in education: Separating fact from fiction. *Theory Into Practice*, 61(4), 406–417. <https://eric.ed.gov/?id=EJ1370568>
- Link, L. J., & Guskey, T. R. (2019). How traditional grading contributes to student inequities. . . and how to fix it. *Curriculum in Context*, 45(1), 12–19. [https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1052&context=edp\\_facpub](https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1052&context=edp_facpub)
- Link, L. J., & Hunter, C. A. (2024, April) *Students' perceptions of classroom assessment and grading*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA. <https://www.aera.net/Events-Meetings/Annual-Meeting/2024-Annual-Meeting>
- Link, L. J., & Kauffman, K. D. (2021). Are your grading policies legally sound? How to avoid court entanglements when student grades are challenged. *School Administrator*, 5(78), 45–48. <https://doi.org/10.1177/0013124516630596>
- Liu, X., O'Connell, A. A., & McCoach, D. B. (2006, April). *The initial validation of teachers' perceptions of grading practices*. Paper presented at the annual conference of the American Educational Research Association, San Francisco, CA. [https://digitalcommons.lib.uconn.edu/cgi/viewcontent.cgi?article=1011&context=nera\\_2008](https://digitalcommons.lib.uconn.edu/cgi/viewcontent.cgi?article=1011&context=nera_2008)
- Marzano, R. J., & Pickering, D. J. (2007). Special topic: The case for and against homework. *Educational Leadership*, 64, 74–79. <https://ascd.org/el/articles/the-case-for-and-against-homework>
- McMillan, J. H. (2001). Secondary teachers' classroom assessment and grading practices. *Educational Measurement: Issues and Practice*, 20(1), 20–32. <https://doi.org/10.1111/j.1745-3992.2001.tb00055.x>
- McMillan, J. H., Myran, S., & Workman, D. (2002). Elementary teachers' classroom assessment and grading practices. *Journal of Educational Research*, 95, 203–213. <https://doi.org/10.1080/00220670209596593>
- McMillan, J. H., & Nash, S. (2000, April). *Teacher classroom assessment and grading decision making*. Paper presented at the Annual Meeting of the National Council of Measurement in Education, New Orleans, LA. <https://doi.org/10.1111/j.1745-3992.2001.tb00055.x>

- Meyers, L. S., Gamst, G., & Guarino, A. J. (2016). *Applied multivariate research: Design and interpretation* (3rd ed.). Sage publications. <https://us.sagepub.com/en-us/nam/applied-multivariate-research/book246895>
- Miller, J. W., Kuykendall, J. A., & Thomas, S. A. (2013). Are we all in this together? An analysis of the impact of individual and institutional characteristics on teachers' perceptions. *School Community Journal, 23*(2), 137–159. <https://doi.org/10.1080/00131880802704634>
- Moroni, S., Dumont, H., Trautwein, U., Niggli, A., & Baeriswyl, F. (2015). The need to distinguish between quantity and quality in research on parental involvement: The example of parental help with homework. *Journal of Educational Research, 108*(5), 417–431. <https://doi.org/10.1080/00220671.2014.901283>
- Mulhenbruck, L., Cooper, H., Nye, B., & Lindsay, J. J. (1999). Homework and achievement: Explaining the different strengths of relation at the elementary and secondary school levels. *Social Psychology of Education, 3*, 295–317. <https://doi.org/10.1023/A:1009680513901>
- Murray, J. (2023). What is the purpose of education? A context for early childhood education. *International Journal of Early Years Education, 31*(3), 571–578. <https://www.tandfonline.com/doi/full/10.1080/0969760.2023.2238399>
- O'Sullivan, J. (2023). Home learning: An exploration of parents' perspectives. *International Journal of Early Years Education, 31*(3), 613–626. <https://doi.org/10.1080/09669760.2022.2137781>
- Patrick, C. M. (2015). *Educational stakeholder perceptions during grading reform in one middle school*. [Unpublished doctoral dissertation]. Lindenwood University. <https://www.proquest.com/docview/1735489657>
- Payne, S. B., & Swanson, E. (2022). Supporting families to motivate their middle school student during homework time. *Teaching Exceptional Children, 55*(6), 422–430. <https://doi.org/10.1177/004005992210996>
- Randall, J., & Engelhard, G. (2010). Examining the grading practices of teachers. *Teaching and Teacher Education, 26*, 1372–1380. <https://doi.org/10.1016/j.tate.2010.03.008>
- Rønning, M. (2011). Who benefits from homework assignments? *Economics of Education Review, 30*(1), 55–64. <https://doi.org/10.1016/j.econedurev.2010.07.001>
- Russell, J. A., & Austin, J. R. (2010). Assessment practices of secondary music teachers. *Journal of Research in Music Education, 58*(1), 37–54. <https://doi.org/10.1177/0022429409360062>
- Seide, S. E., Jensen, J., & Kieser, M. (2020). Utilizing radar graphs in the visualization of simulation and estimation results of network meta-analysis. *Research Synthesis Methods, 12*(1), 96–105. <https://doi.org/10.1002/jrsm.1412>
- Sun, Y., & Cheng, L. (2013). Teachers' grading practices: Meaning and values assigned. *Assessment in Education: Principles, Policy & Practice, 21*, 326–343. <https://doi.org/10.1080/0969594X.2013.768207>
- Svennberg, L., Meckbach, J., & Redelius, K. (2014). Exploring PE teachers' 'gut feelings': An attempt to verbalize and discuss teachers' internalized grading criteria. *European Physical Education Review, 20*, 199–214. <https://doi.org/10.1177/1356336X13517437>
- Swan, G., Guskey, T. R., & Jung, L. A. (2014). Parents' and teachers' perceptions of standards-based and traditional report cards. *Educational Assessment, Evaluation and Accountability, 26*(3), 289–299. <https://doi.org/10.1007/s11092-014-9191-4>
- Timotheou, S., Miliou, O., Dimitriadis, Y., Sobrino, S. V., Giannoutsou, N., Cachia, R., Monés, A. M., & Ioannou, A. (2023). Impacts of digital technologies on education and factors influencing schools' digital capacity and transformation: A literature review. *Education and Information Technologies, 28*(6), 6695–6726. <https://doi.org/10.1007/s10639-022-11431-8>
- Van Voorhis, F. (2011). Costs and benefits of family involvement in homework. *Journal of Advanced Academics, 22*(2), 220–249. <https://doi.org/10.1080/00220670309596616>
- Van Voorhis, F. (2004). Interactive homework in middle school: Effects on family involvement and science achievement. *Journal of Educational Research, 96*, 323–338. <https://www.tandfonline.com/doi/abs/10.1080/00220670309596616>
- Warton, P. M. (1998). Mothers' views about homework in the early years of school. *Australian Journal of Early Childhood, 23*, 35–39. <https://doi.org/10.1177/183693919802300107>

- Wharton-Beck, A., Chou, C. C., Gilbert, C., Johnson, B., & Beck, M. A. (2022). K-12 school leadership perspectives from the COVID-19 pandemic. *Policy Futures in Education, 22*(1), 21–42. <https://doi.org/10.1177/14782103221135620>
- Wright, K. M. (2010). *Beliefs of families, students, and teachers regarding homework for elementary-aged children*. [Unpublished doctoral dissertation]. Tennessee Technological University, Cookeville, TN. <https://eric.ed.gov/?id=ED518892>
- Wu, X., Wu, R., Haney, C., Liu, H., & Liu, J. (2023). How to better balance academic achievement and learning anxiety from time on homework? A multilevel and classification and regression tree analyses, *Frontiers in Psychology, 14*, 1–11. <https://doi.org/10.3389/fpsyg.2023.1130274>
- Xu, J. (2005). Purposes for doing homework reported by middle and high school students. *The Journal of Educational Research, 99*(1), 46–55. <https://doi.org/10.3200/JOER.99.1.46-55>
- Xu, J., & Corno, L. (2003). Family help and homework management reported by middle school students. *Elementary School Journal, 103*(5), 503–518. <https://doi.org/10.1086/499737>
- Yesbeck, D. M. (2011). *Grading practices: Teachers' considerations of academic and non-academic factors* [Doctoral dissertation]. Virginia Commonwealth University. <https://eric.ed.gov/?id=ED539229>